

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	David Fifield		
Assignee:	Broadcom Corporation		
Title:	Antenna Configuration for Wireless Communication Device		
Serial No.:	10/810,112	Filed:	March 26, 2004
Examiner:	Matthew C. Sams	Group Art Unit:	2617
Docket No.:	BP 3208	Customer No.:	34399

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Austin, Texas  
January 3, 2007

COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450

**PRE-APPEAL REQUEST FOR REVIEW**  
**AND STATEMENT OF REASONS**

Sir:

Applicant requests review of the Final Rejection in the above-identified application. No amendments are being filed with the request. This request is being filed with a Notice of Appeal and a Petition for Extension of Time. The following sets forth a succinct, concise, and focused set of arguments for which the review is being requested.

**CLAIM STATUS**

Claims 1-20 are pending. Claims 1-20 were rejected under 35 U.S.C. §103(a), as being unpatentable over Publication No. 2004/0198420 to He (hereinafter "He") in view of Publication No. 20030146876 to Greer (hereinafter "Greer").

## **REMARKS**

Claims 1-20 are pending. Claims 1-20 were rejected in the Final Office Action mailed on August 2, 2006.

### **Response to Rejection of Claims 1-20**

As stated in the Response to the first Office Action, Applicant respectfully submits that the rejection of claims 1-20 under 35 U.S.C. §103(a) in the Final Office Action should be removed because the proposed combination of He and Greer does not provide all of the limitations recited in independent claims 1 and 11.

Independent claims 1 and 11 recite a first pair of antenna elements for transmitting and receiving RF signals at a first frequency and a second pair of antenna elements for transmitting and receiving RF signals at a second frequency.

The He reference discloses a dual-mode wireless transceiver having a first antenna and a second antenna disposed at different locations on a laptop computer. However, as stated by Examiner on page 5 of the Final Office Action, the He reference does not disclose first and second pairs of antenna elements operable to receive and transmit RF signals at first and second frequencies, as recited in independent claims 1 and 11. Examiner seeks to supply this missing limitation by combining the teachings of the Greer reference with the teachings of the He reference.

On page 2 of the Final Office Action, Examiner observes that Greer recites (on page 8, claim 17) “a first pair of antennas having different signal polarization characteristics” and a “second pair of antennas having different radiation pattern characteristics.” Examiner then attempts to combine these “polarization” and “radiation pattern” features with statements in Greer (in the Background section) regarding the IEEE a/b/g standard to support the assertion that Greer teaches “a first and second pair of antenna elements for transmitting and receiving signals at a first frequency and a second frequency.”

As is well understood by those of skill in the art, “polarization” refers to the orientation of the electric field, or “E” plane, of an electromagnetic wave. Those of skill in the art would interpret a “radiation pattern” of an antenna to refer to the directional (angular) dependence of electromagnetic radiation emitted by an antenna. The recitation

of these features in claim 17 of the Greer reference does not provide a teaching of a first pair of antenna elements for transmitting and receiving RF signals at a first frequency and a second pair of antenna elements for transmitting and receiving RF signals at a second frequency, as recited in Applicant's independent claims 1 and 11. The mere reference to the well known IEEE 802.11 a/b/g standard frequencies in the Background section of the Greer reference does not provide a basis to assert that the features recited in claim 17 of Greer provides a teaching of first and second antenna pairs operable to transmit and receive signals at first and second frequencies.

For the reasons set forth above, the combination of Greer and He fails to disclose the limitation recited in independent claims 1 and 11 of "first and second pairs" of individual antenna elements for transmitting at first and second frequencies. It is apparent that the combination of He and Greer fails to anticipate independent claims 1 and 11 and, therefore, the rejection of claims 1 and 11 under 35 U.S.C. §103(a) should be removed.

For the reasons set forth above, independent claims 1 and 11 are allowable over the proposed combination of He and Greer and, therefore, the rejection of these claims under 35 U.S.C. §103(a) should be removed. Furthermore, dependent claims 2-10 and 12-20 are allowable since they are dependent from allowable base claims.

### **CONCLUSION**

Applicant respectfully submits that all pending claims are in condition for allowance. Accordingly, Applicant requests that a Notice of Allowance be issued. Should any issues remain that might be subject to resolution through a telephone interview, the Examiner is requested to telephone the undersigned at 512-338-9100.

ELECTRONICALLY FILED

December 4, 2006

Respectfully submitted,

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